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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,958	06/29/2001	Xuelu Zou	024705-110	6091

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EXAMINER	
BOLDEN, ELIZABETH A	
ART UNIT	**PAPER NUMBER**
1755	

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/893,958	ZOU ET AL.	
	Examiner	Art Unit	
	Elizabeth A. Bolden	1755	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,11,12,17-19,59-63,70-94 and 101-216* is/are pending in the application.

4a) Of the above claim(s) *102-104 and 107* is/are withdrawn from consideration.

5)☒ Claim(s) *See Continuation Sheet* is/are allowed.

6)☒ Claim(s) *See Continuation Sheet* is/are rejected.

7)☒ Claim(s) *113,119-124 and 187-216* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/2/04,4/13&30/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims allowed are 1,2,11,12,17-19,59-62,70,71,73-75,77-79,81-83,85-89,91-93,101,105,106,108,110,115,128,144 and 174.
Continuation of Disposition of Claims: Claims rejected are 3,63,72,76,80,84,90,94,109,111,112,114,116,117,125-127,129-143,145-173,175-189 and 191-216.

DETAILED ACTION

Any rejections and or objections, made in the previous Office Action, and not repeated below, are hereby withdrawn.

Claim Objections

Claims 139 and 161 objected to because of the following informalities: typographical errors.

In claim 139, line 4, the range for B_2O_3 recites "O.2-15", the letter "O" should be replaced with the numeral "0", so that the range reads "0.2-15".

In claim 161, line 8, the range for TiO_2 recites "2-1O", the letter "O" should be replaced with the numeral "0", so that the range reads "2-10".

Appropriate correction is required.

Claims 187-216 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 187-216, recite, "An optical part prepared by precisely press molding the precision press molding preform glass", this is a process recitation in a product claim. Product claims including process recitations are not limited by the manipulation of the recited steps, only the structure implied by the steps. See 2113. In the present instance, the process steps imply that the glass is in the form of an optical part. And since a precision press molding preform could be considered an optical part and since there is no structure defining the optical part, claims 187-216 do not further limit the claim from which they depend.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 117, 118, 136, 139, and 168 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 117 and 118 are rendered indefinite since the ranges for the glass components Nb_2O_5, K_2O, BaO, ZnO, and TiO_2 include 0 mole percent, however, the claims also state that these components are essential components to the glass composition.

Claim 136, 139, and 168 are rendered indefinite since the range for the glass component TiO_2 include 0 mole percent, however, the claims also state that this component is an essential component to the glass composition.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 126, 142, 172, and 188 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakahata et al., U.S. Patent 6,333,282.

Nakahata et al. disclose an optical glass comprising in weight percent 14-31 % P_2O_5, 0-5 % B_2O_3, 0-14 % GeO_2, 0-6 % Li_2O, 2.5-14 % Na_2O, 22-50 % Nb_2O_5, 0-30 % WO_3, 5-36 % Bi_2O_3, and 0-22 % BaO. See abstract of Nakahata et al. Additionally, Nakahata et al. disclose examples 12 and 13. See Table 1. These examples are given in weight percent the table below shows both the weight and mole percent values.

	EX 12 WT %	EX 12 MOL %	EX 13 WT %	EX 13 MOL %
B_2O_3	4.50	9.58	1.00	2.11
P_2O_5	14.50	15.14	20.00	20.72
GeO_2				
Li_2O	3.00	14.82	1.00	4.90
Na_20	3.00	7.17	11.00	26.10
BaO	22.00	21.26	7.00	6.71
Nb_2O_5	31.00	17.28	40.00	22.13
WO_3	7.00	9.98	10.00	14.15
Bi_2O_3	15.00	4.77	10.00	3.16

Examples 12 and 13 meet the compositional limitations of claim 126.

Nakahata et al. disclose that the glass has a yield temperature of at most 550 °C, a refractive index of at least 1.83 and an Abbe number of at most 26.0. See abstract of Nakahata et

al. These ranges of properties are sufficiently specific to anticipate the respective property limitations in claim 126. See MPEP 2131.03.

Since the composition of the reference is the same as those claimed herein it follows that the glasses of Nakahata et al. would inherently have the same T_g as recited in claim 126. See MPEP 2112.

The reference discloses that the glass can be formed into a preform and then precision molded to obtain lenses. See column 5, lines 11-17. Thus meeting the limitation of claims 142, 172, and 188.

Claims 111, 112, 114, 126, 142, 172, and 188 are rejected under 35 U.S.C. 102(b) as being anticipated by Koichi, Japanese Patent JP 07-097234.

Koichi discloses an optical glass comprising in terms of weight percent. See abstract of Koichi. Additionally, Koichi discloses examples 5 and 6. See Table 1. These examples are given in weight percent the table below shows both the weight and mole percent values.

	EX 5 WT %	EX 5 MOL %	EX 6 WT %	EX 6 MOL %
B_2O_3	1.0	2.44	2.5	4.32
P_2O_5	18.4	22.0	19.4	16.43
GeO_2	0		4.0	4.60
K_2O	7.8	14.06	2.8	3.57
Na_20	5.0	13.69	20.0	38.79
BaO			3.0	2.36
TiO_2			6	9.03
Nb_2O_5	21.1	13.48	16.6	7.51
WO_3	46.7	34.17	25.7	13.32
Sb_2O_3			0.2	0.08
As_2O_3	.2	0.17		

Example 5 meets the compositional limitations of claim 126 and example 6 meets the compositional limitations of claims 111, 112, and 114.

Koichi discloses that the glass has a yield temperature of at most 570 °C, a refractive index of 1.69-1.83 and an Abbe number of 21-32. See abstract of Koichi. These ranges of properties are sufficiently specific to anticipate the respective property limitations in claim 126. See MPEP 2131.03.

Since the composition of the reference is the same as those claimed herein it follows that the glasses of Koichi would inherently have the same T_g as recited in claim 126. See MPEP 2112.

The reference discloses that the glass can be formed into a preform and then precision molded to obtain lenses. See abstract. Thus meeting the limitation of claims 142, 172, and 188.

Claims 3, 63, 72, 76, 84, 90, 94, 109, 116, 125-127, 129-143, 145-173, 175-189, and 191-216 are rejected under 35 U.S.C. 102(a) as being anticipated by Nakahata et al., European Patent Publication EP 1 078 894 A2.

Nakahata et al. disclose an optical glass comprising in terms of weight. See abstract of Nakahata et al. Additionally, Nakahata et al. disclose comparative examples 2, 4, and 5. See Table 2. These examples are given in weight percent the table below shows both the weight and mole percent values.

Comparative examples 2 and 5 meet the compositional limitations of claim 126 and comparative example 4 meets the compositional limitations of claims 109, 116, 125-127, 129-140, and 157-170.

	EX 2 WT %	EX 2 MOL %	EX 4 WT %	EX 4 MOL %	EX 5 WT %	EX 5 MOL %
B_2O_3	5.6	9.91	2.6	5.17	2.6	5.01
P_2O_5	23.9	20.76	23.5	23.22	27.8	26.26
K_2O	7.0	9.19	1.5	2.21	2.5	3.57
Li_2O	1.0	4.11	3.0	13.85	2.0	8.94
Na_20	9.5	18.90	5.7	12.74	6.7	14.49
TiO_2	9.2	14.19	3.6	6.24	8.6	14.43
BaO			12.3	11.11	5.0	4.37
Nb_2O_5	33.8	15.66	38.3	19.94	39.8	20.05
WO_3	7.0	3.72	9.0	5.38	5.0	2.89
SrO	3.0	3.56				

Nakahata et al. disclose that the glass has a yield temperature of at most 550 °C, a refractive index of at least 1.83 and an Abbe number of at most 26.0. See abstract of Nakahata et al. These ranges of properties are sufficiently specific to anticipate the respective property limitations in claims 3, 76, and 126. See MPEP 2131.03.

Since the composition of the reference is the same as those claimed herein it follows that the glasses of Nakahata et al. would inherently have the same T_g, liquidus temperature, density of oxygen atoms, and transmittances as recited in at least one of claims 3, 63, 72, 80, and 126. See MPEP 2112.

The reference discloses that the glass can be formed into a preform and then precision molded to obtain lenses. See column 5, lines 11-17. Thus meeting the limitation of claims 84, 90, 94, 141-143, 145-156, 171-173, 175-189, and 191-216.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 111, 112, 114, 115, 138-140, and 184-186 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi et al., U.S. Patent 4,115,131.

Ishibashi et al. teach an optical glass in terms of weight percent. See column 1, lines 47-53, column 7, line 4 to column 8, line 16. Ishibashi et al. teach a glass having overlapping ranges of refractive index and Abbe number with instant claims 111, 112, 114, 115, 138-140, and 184-186. See abstract.

Ishibashi et al. differs from the instant claims by not teaching the glass composition in terms of mole percent.

It is believed that Ishibashi et al. teach a composition whose ranges if converted from wt% to mol % would overlap the compositional limitations of claims 111, 112, 114, 115, 138-140, and 184-186 and theoretical composition below. See column 1, lines 47-53 and column 7, line 4 to column 8, line 16. Overlapping ranges have been held to establish *prima facia* obviousness. MPEP 2144.05

	B_2O_3	P_2O_5	GeO_2	Li_2O	Na_2O	K_2O	SrO	BaO	ZnO	TiO_2	Nb_2O_5	WO_3
Wt %	4.0	20.0	1.0	4.0	7.0	2.0	2.0	6.0	5.0	5.0	28.0	16.0
Mol %	6.9	16.9	1.2	16.0	13.6	2.6	2.3	4.7	7.4	7.5	12.7	8.3

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the ranges disclosed by the reference because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP 2144.05.

One of ordinary skill in the art would expect that a glass with overlapping compositional ranges would have the properties recited in claims 111, 112, 114, 115, 138-140, and 184-186.

Allowable Subject Matter

Claims 1, 2, 11, 12, 17-19, 59-62, 70, 71, 73-75, 77-79, 81-83, 85-89, 91-93, 101, 105, 106, 108, 110, 115, 128, 144, and 174 are allowed.

Claims 112, 113, 119-124, and 190 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and correcting any 35 U.S.C. 112 rejections in the independent claims.

The following is an examiner's statement of reasons for allowance:

The prior art fail to disclose or suggest a glass composition having the components in mole % as recited in the instant claims with emphasis on the total amounts of the essential components and the combinations of essential components and the glass properties as recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

In response to applicant's argument that the glass preform is for precision press molding, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Bolden whose telephone number is 571-272-1363. The examiner can normally be reached on 9:30 am-7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on 571-272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EAB
13 November 2004

KARL GROUP
PRIMARY EXAMINER
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